

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1. - 23. (Canceled)

24. (Currently amended) A method of constructing and thereafter installing at a direct smelting plant site a smelting unit comprising a direct smelting vessel, which method comprises the steps of:

prefabricating away from a predetermined location of the plant site for the direct smelting vessel, a base module, ~~and one or more further vessel modules~~ an intermediate module, and an upper module to be brought together to form the vessel, each module comprising a ~~circumferential~~ cylindrical vessel wall section formed of steel plate,

transporting the prefabricated ~~vessel~~ modules to the predetermined location and depositing sequentially the base module, ~~and the one or more further vessel modules~~ the intermediate module, and the upper module on top of one another by depositing the intermediate module onto the base module and connecting the intermediate module to an upper part of the base module, and by depositing the upper module on an upper part of the intermediate module and connecting the upper module to the upper part of the intermediate module, and

joining ~~them~~ the modules together by one or more continuous horizontal circumferential welds between successive ~~circumferential~~ cylindrical wall sections of the modules to form a unitary direct smelting vessel,

prefabricating away from said predetermined location a plurality of tower modules to be brought together to form a vessel access tower that extends about the vessel at the completion of installation,

transporting the prefabricated tower modules to the predetermined location, and depositing the prefabricated tower modules sequentially on top of one another and joining them together to form the tower, wherein the base and intermediate modules of the vessel and adjacent tower modules are installed prior to the installation of the upper module of the vessel.

25. (Canceled)

26. (Canceled)

27. (Previously presented) A method as claimed in claim 24, wherein a concrete foundation pad is pre-formed at the predetermined location to receive the base module.

28. (Previously presented) A method as claimed in claim 27, wherein a series of load bearing members are located intermediate an external bottom surface of the

base module and an upper surface of the concrete foundation pad to thereby enable air to flow between the base module and the foundation pad.

29. (Previously presented) A method as claimed in claim 24, wherein the base module includes a hearth and a forehearth for discharging molten metal.

30. (Previously presented) A method as claimed in claim 29, wherein the hearth and forehearth are lined with refractory bricks after installation at the smelting plant site.

31. (Currently amended) A method as claimed in claim ~~[[26]]~~ 24, wherein the intermediate vessel module comprises a generally cylindrical barrel section provided with a tap hole for discharging molten slag.

32. (Currently amended) A method as claimed in claim ~~[[26]]~~ 24, wherein the upper vessel module is provided with an outlet for off gases.

33. (Currently amended) A method as claimed in claim 27, wherein at least one of the ~~further~~ intermediate and upper vessel modules is prefabricated so as to be internally lined with water cooling panels connected to water inlet and outlet connectors on the exterior of the circumferential wall section of that module.

34. (Currently amended) A method as claimed in claim ~~[[26]]~~ 24, wherein the intermediate vessel module and the upper vessel module are both prefabricated so as to be internally lined with water cooling panels connected to water inlet and outlet connectors on the exterior of the circumferential wall sections of those modules.

35. (Currently amended) A method as claimed in claim 33, wherein the base module is ~~also~~ prefabricated so as to be partially internally lined with water panels connected to respective water inlet and outlet connectors on the exterior of the circumferential wall section of the base module.

36. (Canceled)

37. (Canceled)

38. (Currently amended) A method as claimed in claim ~~[[37]]~~ 24, wherein at least one pair of the tower modules is connected together at the same level as the connection between a pair of the vessel modules.

39. (Currently amended) A method as claimed in claim ~~[[36]]~~ 24, wherein at least some of the tower modules are installed before the vessel modules about which they are to extend are installed, the latter vessel modules being deposited downwardly into the interior of the installed tower modules.

40. (Currently amended) A method according to claim 24, ~~which also~~  
~~comprises~~ further comprising the steps of:  
pre-fabricating off-gas ducting and treatment modules to be brought together to  
form off-gas ducting and treatment apparatus,  
transporting to site said off-gas ducting and treatment modules, and  
installing ~~them~~ the off-gas ducting and treatment modules in a predetermined  
order to provide a continuous gas tight connection between an outlet of the upper  
vessel module and the off-gas ducting and treatment apparatus.

41. (Currently amended) The method of claim 40 wherein at least one ~~module~~  
of the off-gas ducting and treatment modules comprises a wet scrubber with  
substantially vertical orientation and having an outlet disposed to receive a substantially  
vertical section of off-gas ducting.

42. (Currently amended) The method of claim 40, wherein said outlet of said  
upper vessel module is disposed within a substantially vertical plane and connects with  
[[an]] a first off-gas ducting module disposed at an angle to a horizontal axis of between  
zero and fifteen degrees.

43. (Currently amended) The method of claim 42, wherein said upper vessel  
module is connected with said first off-gas ducting module prior to installation whereby  
both said modules are installed onto said intermediate module as a single module.

44. (Currently amended) The method of claim 42, wherein said first off-gas ducting module has an outlet remote from said upper vessel module and disposed to receive a further off-gas ducting module extending vertically upwardly.

45. (Currently amended) The method of claim 40, wherein said off-gas ~~duct~~ ducting comprises an off-gas ducting module arranged with a substantially inverted U-shape, each leg of said substantially inverted U-shape off-gas ducting module having an outlet for connection with an outlet of a vertically extending off-gas ducting module.

46. (Currently amended) The method of claim 45, wherein one of said outlets of said vertically extending off-gas ducting modules for connection with an outlet of each leg comprises an outlet of said a wet scrubber.

47. (New) The method as claimed in claim 24, wherein subsequent to installation of the upper module of the vessel a tower module is installed adjacent the upper module.

48. (New) The method as claimed in claim 24, wherein the upper module and a section of an off-gas duct are installed as single unit.